



TOWN OF ARLINGTON
DEPARTMENT OF PLANNING and
COMMUNITY DEVELOPMENT

TOWN HALL, 730 MASSACHUSETTS AVENUE
ARLINGTON, MASSACHUSETTS 02476
TELEPHONE 781-316-3090

MEMORANDUM

To: Jim Feeney, Town Manager
Cc: Claire Ricker, Director, Planning and Community Development
Douglas Heim, Town Counsel
Michael Cunningham, Deputy Town Counsel
Michael Ciampa, Director, Inspectional Services
Ryan Katofsky, Chair, Clean Energy Future Committee
From: Talia Fox, Sustainability Manager, Planning and Community Development
Date: September 22, 2023
RE: Municipal Fossil Fuel-Free Building Demonstration Program

The Town Manager and the Clean Energy Future Committee (CEFC) have proposed a warrant article to see if Town Meeting will vote to amend Title VI of the Town Bylaws to add a new section entitled "Fossil Fuel-Free Demonstration." The purpose of this amendment is to update the Town's previously approved Clean Heat Bylaw, enabling the Town's participation in the Municipal Fossil Fuel-Free Building Demonstration Program ("Demonstration Program"). Passing this updated bylaw, a prerequisite for participating in the Demonstration Program, will allow the Town to restrict the use of fossil fuel infrastructure in new building construction and major renovations, in furtherance of our goal to reach net zero greenhouse gas emissions by 2050. This memorandum includes the following:

1. Review of Arlington's 2020 Clean Heat Bylaw
2. Introduction to the Municipal Fossil Fuel-Free Building Demonstration Program
3. Review of Updated Fossil Fuel-Free Bylaw and Proposed Changes

Review of Arlington's 2020 Clean Heat Bylaw

In 2020, 92% of Town Meeting Members voted to enact a Clean Heat Bylaw, which would have required all new construction and major renovations to be fossil fuel-free, with some exemptions and waiver possibilities. The Attorney General's Municipal Law Unit (MLU) determined that it could not approve Clean Heat Bylaws like Arlington's, due to their preemption by state law; instead, the state legislature would have to approve individual municipalities' home rule petitions. In 2021, Arlington was the first of several municipalities in the Commonwealth to file a home rule petition requesting local authority to enact the Clean Heat Bylaw. The legislature declined to approve any of the home rule petitions. Accordingly, the Clean Heat Bylaw was never officially approved by the Attorney General's Office, and Arlington's Clean Heat Bylaw has not gone into effect.

Introduction to the Municipal Fossil Fuel-Free Building Demonstration Program

As an alternative to the process described above for enabling our Clean Heat Bylaw, the legislature authorized the creation of the Municipal Fossil Fuel-Free Building Demonstration Program,¹ allowing up to 10 communities to implement fossil fuel-free ordinances or bylaws. To participate in this Demonstration Program, among other requirements, Arlington must re-adopt a bylaw to prohibit the installation of fossil fuel piping and equipment in new construction and major renovations. The Department of Energy Resources (DOER), which the state legislature authorized to develop the regulations for the Demonstration Program, created a model fossil fuel-free bylaw/ordinance (“Model Rule”) that municipalities are strongly encouraged to adopt to facilitate their participation in the Demonstration Program. In fact, in their applications for the Demonstration Program, municipalities were required to explain any differences between the Model Rule and their proposed bylaws.

Review of Updated Fossil Fuel-Free Bylaw and Proposed Changes

The CEFC has proposed updates to the previously adopted Clean Heat Bylaw to better align it with the recently updated Stretch Code and Specialized Stretch Energy Code (“Specialized Code”) and the DOER Model Rule. These updates will enable smoother implementation and approval of Arlington’s application to the Demonstration Program. The proposed updates are also important in their own right, as there have been advances in technology and policy since Town Meeting adopted the original bylaw in 2020.

That said, it is critical to note that *much of the Clean Heat Bylaw’s original content has been retained, including important provisions for waivers and appeals, and exemptions for research and medical facilities, hot water for large buildings, utility-side connections to gas meters, backup generators, portable propane appliances, extension or modification of existing fossil fuel-based heating systems, and repair of existing, unsafe piping.*

The most significant modifications to the Town’s Clean Heat Bylaw are:

1. **Enforcement framework that better aligns with the Specialized Code.** The Specialized Code, now incorporated into the Town’s bylaws after approval by 2023 Annual Town Meeting, does not ban fossil fuels, nor does it apply to major renovations. Rather, it incentivizes electrification for new construction by making it more expensive to install fossil fuel infrastructure. The proposed enforcement framework for the updated fossil fuel-free bylaw eliminates the pathways in the Specialized Code that allow for the use of fossil fuels, thereby streamlining and clarifying bylaw implementation for the Town’s Inspectional Services Department. This enforcement framework comes directly from the DOER Model Rule.
2. **Updates to the definition of major renovation to align square footage thresholds more closely with those in the Specialized Code and Model Rule.** Whether a renovation qualifies as a major renovation determines if the project is subject to the requirements of the fossil fuel-free bylaw. In consultation with the Town’s Director of Inspectional Services, the CEFC has proposed to align the definition of major renovations in the updated bylaw more closely with the definition of major renovations included in the DOER Model Rule. DOER’s definition mirrors the definition of alteration in the Stretch Code, streamlining implementation on the part of Arlington’s Department of Inspectional Services. Importantly, it also retains the Clean Heat Bylaw’s exclusion of additions and changes of use.

¹ Municipal Fossil Fuel-Free Building Construction and Renovation Demonstration Project. 225 CMR 24.00 (2023).
<https://www.mass.gov/doc/225-cmr-2400-finalclean/download>

3. **Removal of the exemption for indoor cooking appliances.** The CEFC has proposed this update to the Town's Clean Heat Bylaw to align with the DOER Model Rule and the growing body of evidence regarding the negative impacts to indoor air quality and human health of gas stoves, including the alarming statistic from a recent study that "gas stoves are responsible for 15.4 percent of childhood asthma cases in Massachusetts."² Where alternatives to gas cooking appliances are financially infeasible or impractical for the intended building use, the waiver process detailed in the proposed bylaw (retained verbatim from the Clean Heat Bylaw) is available. The bylaw specifies that the Select Board is to issue guidance on this waiver process and the Town Manager is to hear appeals from decisions by the Building Inspector.
4. **Use of DOER Model Rule language for the multifamily building domestic hot water exemption.** An exemption from the Clean Heat Bylaw for domestic hot water service in multifamily buildings where alternatives are not commercially available has been retained but updated to match the exemption language in the DOER Model Rule. The primary purpose of this exemption is to prevent a burden to larger multifamily developments that may contain affordable housing. It acknowledges the reality that commercially available technology for efficient electric hot water systems serving developments of this size is still limited and costly. The updated exemption uses a square footage threshold that aligns with the threshold for multifamily properties in the Stretch Code (12,000 square feet). It also sets a clear deadline for the sunset of the exemption that aligns with expected market conditions and technology availability. Waivers could still cover any cases beyond this date.
5. **Update of Effective Date for Bylaw.** The Town's Clean Heat Bylaw set an effective date of "six months following the date by which the Town is authorized by Special Act to regulate fossil fuel infrastructure by the Commonwealth of Massachusetts..." As discussed above, the Massachusetts Legislature never approved the Town's home rule petition but rather created the Demonstration Program, over one year ago. Both technology and policy have advanced in the three years since Town Meeting passed the Clean Heat Bylaw. The Town's Director of Inspectional Services and CEFC determined it was appropriate to propose an effective date of 90 days following the date on which the Town is authorized by DOER to regulate fossil fuel infrastructure for inclusion in the updated Fossil Fuel-Free Bylaw.

A side-by-side comparison of the key changes is given in the table below. Other, non-substantive, changes have been made to phrasing and language in the Town's previously adopted Clean Heat Bylaw in order to incorporate up-to-date references to applicable legislation and regulations and ensure consistency with the DOER Model Rule.

² Gruenwald, T., Seals, B. A., Knibbs, L. D., & Hosgood, H. D. (2022). Population Attributable Fraction of Gas Stoves and Childhood Asthma in the United States. *International Journal of Environmental Research and Public Health*, 20(1), 75. MDPI AG. Retrieved from <http://dx.doi.org/10.3390/ijerph20010075>

Summary of Updates to 2020 Clean Heat Bylaw in New, Fossil Fuel-Free Demonstration Program Bylaw

Update	2020 Clean Heat Bylaw (as passed by Town Meeting)	2023 Updated Fossil Fuel-Free Bylaw (as currently proposed)
1. Enforcement framework that better aligns with the Specialized Code.	“Upon the Effective Date, no permits shall be issued by the Town for the construction of New Buildings or Major Renovations that include the installation of new On-Site Fossil Fuel Infrastructure...”	Eliminates the “mixed-fuel” pathways from the recently adopted Specialized Code, which permit the use of fossil fuels. Thus, the only pathways remaining for new building construction are those that do not use fossil fuels. Prohibitions of installation of equipment or appliances using fossil fuels in major renovations are retained from the 2020 Clean Heat Bylaw.
2. Updates to the definition of major renovation to align square footage thresholds more closely with those in the Specialized Stretch Code and Model Rule.	Residential: major renovation defined as including 75% or more of the existing Gross Floor Area (i.e., excluding any added space) Commercial: major renovation defined as including 50% or more of the existing Gross Floor Area (i.e., excluding any added space)	Low-rise residential buildings: major renovation defined as the “Work Area” exceeding 50% of the existing conditioned floor area, as long as this area is greater than 1,000 square feet. All other buildings: major renovation defined as the “Work Area” exceeding 50% of existing conditioned floor area or the “Work Area” exceeding 20,000 square feet. Both definitions align with those in the International Existing Building Code (IEBC 2021).
3. Removal of the exemption for indoor cooking appliances.	“The requirements of this bylaw shall not apply to piping required for cooking appliances and related appliances.”	No exemption for cooking. Applicants may use the waiver process where electricity powered indoor cooking appliances are “financially infeasible or impractical to implement.”
4. Use of DOER Model Rule language for the multifamily building domestic hot water exemption.	Exemption for buildings of 10,000 square feet or larger, provided that that no commercially available electric hot water heater exists that could meet the required hot water demand for less than 150% of installation or operational costs, compared to a conventional fossil-fuel hot water system.	Exemption for all multi-family buildings over 12,000 square feet with permit application filed prior to January 1, 2027. After this date, the waiver process shall apply.
5. Update of Effective Date for Bylaw.	“‘Effective Date’ shall mean July 1, 2022, or six months following the date by which the Town is authorized by Special Act to regulate fossil fuel infrastructure by the Commonwealth of Massachusetts, whichever is later in time.”	“‘Effective Date’ shall mean 90 days following the date on which the Town is authorized by the Department of Energy Resources to regulate fossil fuel infrastructure.”